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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/986,067	11/07/2001	Yasuyuki Kusumoto	011454	4732

23850 7590 09/15/2003

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EXAMINER

MARTIN, ANGELA J

ART UNIT PAPER NUMBER

1745

DATE MAILED: 09/15/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.  
09/986,067

Applicant(s)  
Kusumoto et al.

Examiner  
Angela J. Martin

Art Unit  
1745



— The MAILING DATE of this communication appears on the cover sheet with the correspondence address —

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on Nov 7, 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above, claim(s) 5-12 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claims \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some\* c) ☐ None of:
- ☒ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\*See the attached detailed Office action for a list of the certified copies not received.

- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). \_\_\_\_\_ 6) ☐ Other:

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## DETAILED ACTION

### *Election/Restriction*

1. Claims 5-12 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made without traverse in Paper No. 4.

### *Claim Rejections - 35 USC § 103*

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Uchikawa et al., Japanese Pat. No. 2000-243392, in view of Linden, Handbook of Batteries.

Rejection of claims 1-4 drawn to a non-aqueous electrolyte battery.

Uchikawa et al., teach a non-aqueous electrolyte battery comprising a positive electrode (p. 1 of 11 of machine translation, sect. 0001), a negative electrode which is lithium metal (p. 6 of 11 of machine translation, sect. 0042), and a non-aqueous electrolyte using an organic solvent

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(p. 6 of 11 of machine translation, sect. 0042), wherein the positive electrode material contains at least ferrite (p. 3 of 11 of machine translation, sect. 0016). It also teaches the ferrite is  $\text{CoFe}_2\text{O}_4$  (p. 1 of 11 of machine translation, claim 6). In addition, it teaches the non-aqueous electrolyte battery is a secondary battery wherein discharge/charge is repeatedly performed (rechargeable) (p. 1 of 11 of machine translation, claim 8).

Uchikawa et al., do not teach the negative electrode material is a lithium alloy.

Linden teaches that lithium metal used as a negative electrode material for a negative electrode has "persistent safety problems" (p. 36.5, para. 2-5) and that lithium-alloy anodes are "considered safer than metallic lithium" (p. 36.19, Table 36.10).

Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to insert the teachings of Linden into the teachings of Uchikawa et al., because the lithium metal anode is not as safe as the lithium-alloy anode. There are "difficulties associated with the use of metallic lithium...that occur after repetitive charge-discharge cycling." Therefore, one of ordinary skill would be motivated to employ lithium-alloy as the negative active material of the non-aqueous electrolyte battery.

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*Examiner Correspondence*

4. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Angela J. Martin whose telephone number is (703) 305-0586. The Examiner can normally be reached on Monday - Friday from 8:00am to 4:00pm.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's Supervisor, Patrick Ryan, can be reached at (703) 308-2383.

In order to transmit an official fax/non-final, the number is (703) 872-9310. In order to transmit an official fax/after final, the number is (703) 872-9311.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0661.

AJM

A handwritten signature in cursive script, appearing to read "Angela J. Martin". The signature is written in black ink and is positioned to the right of the initials "AJM".